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# USATHAMA

U.S. Army Toxic and Hazardous Materials Agency

## Enhanced Preliminary Assessment Report:

Addison Army Housing Units  
Addison, Illinois

November 1989

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prepared for

Commander

U.S. Army Toxic and Hazardous Materials Agency  
Aberdeen Proving Ground, Maryland 21010-5401

prepared by

Environmental Research Division  
Argonne National Laboratory  
Argonne, Illinois 60439

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Commander, U.S. Army Toxic and Hazardous Materials Agency,  
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Environmental Research Division,  
Argonne National Laboratory, Argonne, Illinois 60439-4815

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<p>Argonne National Laboratory has conducted an enhanced preliminary assessment of the Army housing property located in Addison, IL. The objectives of this assessment include identifying and characterizing all environmentally significant operations, identifying areas of environmental contamination that may require immediate remedial actions, identifying other actions which may be necessary to resolve all identified environmental problems, and identifying other environmental concerns that may present impediments to the expeditious sale of this property. <i>Keywords: Environmental Toxicity, GDO</i></p>			
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## SUMMARY

The Addison housing area located in Addison, Ill., presents no imminent or substantial threat to human health or the environment. There is no evidence to suggest that hazardous or toxic constituents have ever been released from this property. No immediate remedial actions are therefore warranted for the site.

Although these housing units were originally developed in support of a Nike missile battery, all available documentation and circumstantial evidence suggest that the housing area was wholly independent of the battery's operational activities. No Nike-related wastes were delivered to this property for management or disposal. Furthermore, since this property was independent of the Nike missile operations with respect to all necessary utilities, there is no possibility of the migration of Nike-related wastes along buried utility lines.

The following action is recommended prior to release of this property.

- Sample the Army-owned electrical transformers on the property for the presence of polychlorinated biphenyls (PCBs) and label the transformers in accordance with the applicable regulations.

This recommendation assumes that the property will most likely continue to be used for residential housing.





## 1 INTRODUCTION

In October 1988, Congress passed the Defense Authorization Amendments and Base Closure and Realignment Act, Public Law 100-526. This legislation provided the framework for making decisions about military base closures and realignments. The overall objective of the legislation is to close and realign bases so as to maximize savings without impairing the Army's overall military mission. In December 1988, the Defense Secretary's ad hoc Commission on Base Realignment and Closure issued its final report nominating candidate installations. The Commission's recommendations, subsequently approved by Congress, affect 111 Army installations, of which 81 are to be closed. Among the affected installations are 53 military housing areas, including the Addison housing area addressed in this preliminary assessment.<sup>1</sup>

Legislative directives require that all base closures and realignments be performed in accordance with applicable provisions of the National Environmental Policy Act (NEPA). As a result, NEPA documentation is being prepared for all properties scheduled to be closed or realigned. The newly formed Base Closure Division of the U.S. Army Toxic and Hazardous Materials Agency is responsible for supervising the preliminary assessment effort for all affected properties. These USATHAMA assessments will subsequently be incorporated into the NEPA documentation being prepared for the properties.

This document is a report of the enhanced preliminary assessment (PA) conducted by Argonne National Laboratory (ANL) at the Army stand-alone housing area in Addison, Ill.

### 1.1 AUTHORITY FOR THE PA

The USATHAMA has engaged ANL to support the Base Closure Program by assessing the environmental quality of the installations proposed for closure or realignment. Preliminary assessments are being conducted under the authority of the Defense Department's Installation Restoration Program (IRP); the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Public Law 91-510, also known as Superfund; the Superfund Amendments and Reauthorization Act of 1986, Public Law 99-499; and the Defense Authorization Amendments and Base Closure and Realignment Act of 1988, Public Law 100-526.

In conducting preliminary assessments, ANL has followed the methodologies and procedures outlined in Phase I of the IRP. Consequently, this PA addresses all documented or suspected incidents of actual or potential release of hazardous or toxic constituents to the environment.

In addition, this PA is "enhanced" to cover topics not normally addressed in a Phase I preliminary assessment. Specifically, this assessment considers and evaluates the following topical areas and issues:

- Status with respect to regulatory compliance,
- Asbestos,
- Polychlorinated biphenyls (PCBs),
- Radon hazards (to be assessed and reported on independently),
- Underground storage tanks,
- Current or potential restraints on facility utilization,
- Environmental issues requiring resolution,
- Health-risk perspectives associated with residential land use, and
- Other environmental concerns that might present impediments to the expeditious "excessing," or transfer and/or release, of federally owned property.

## 1.2 OBJECTIVES

This enhanced PA is based on existing information from Army housing records of initial property acquisition, initial construction, and major renovations and remodeling performed by local contractors or by the Army Corps of Engineers. The PA effort does not include the generation of new data. The objectives of the PA include:

- Identifying and characterizing all environmentally significant operations (ESOs),
- Identifying property areas or ESOs that may require a site investigation,
- Identifying ESOs or areas of environmental contamination that may require immediate remedial action,
- Identifying other actions that may be necessary to address and resolve all identified environmental problems, and
- Identifying other environmental concerns that may present impediments to the expeditious transfer of this property.

### 1.3 PROCEDURES

The PA began with a review of Army Housing records<sup>2</sup> located at the Office of the Directorate of Engineering and Housing (DEH) at Fort Sheridan, Ill., on August 22, 1989. This was followed, on the same day, by a visit and general inspection of the Addison housing site.<sup>3</sup> At the time of the site visit, the interior of an unoccupied housing unit was inspected and photographs were taken of the housing units and surrounding properties as a means of documenting the condition of the housing units and immediate land uses. Site photographs are appended. Additional information was obtained in a follow up meeting with the DEH personnel on September 1, 1989, and in telephone conversations on September 5 and 14, 1989.<sup>4</sup>

All available information was evaluated with respect to actual or potential releases to air, soil, and surface and ground waters.

Access to individual unoccupied housing units was obtained through the DEH office at Fort Sheridan.

## 2 PROPERTY CHARACTERIZATION

### 2.1 GENERAL PROPERTY INFORMATION

The Addison housing area is located in the town of Addison, Du Page County, Illinois. Addison, a western suburb of Chicago, had a 1984 estimated population of 30,000.<sup>5</sup> Figures 1 and 2 show the general location of the facility.

The Addison housing property is situated on 5.01 acres of land, improved with 12 single-family homes and ancillary facilities.<sup>6</sup> The housing units were constructed in 1958.<sup>2</sup> No additional permanent structures have been constructed on the property since that time. The DEH at Fort Sheridan is responsible for major renovations or upgrading within the facility.

### 2.2 DESCRIPTION OF FACILITY

Figure 3 presents the site plan of the housing property.

#### Housing Units

The Addison housing site consists of 12 "Capehart"-style houses. Capehart is the model name assigned by the builder, National Homes. These wood-frame houses are built on concrete slabs. Water lines and air conditioning ducts are embedded in the foundation slab. There are seven three-bedroom units and five two-bedroom units at the site. Each unit has a car parking area in the front and a storage shed at the rear.

#### Utilities

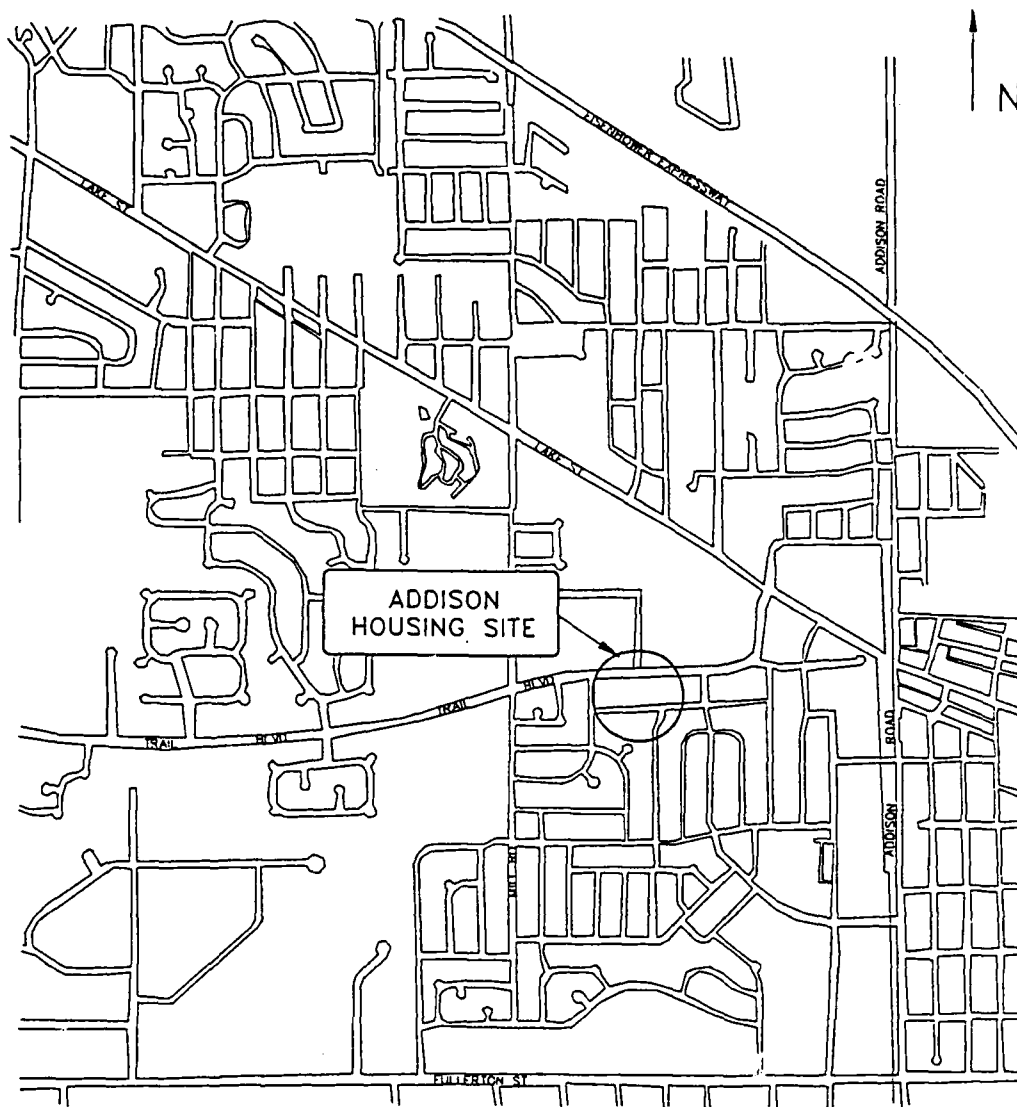
Since construction in 1958, the housing units have been supplied with city water from Addison.<sup>4</sup> Electricity is supplied by the Commonwealth Edison Company.<sup>4</sup> The transformers on-site are owned by the Army, with the DEH at Fort Sheridan responsible for them.<sup>3</sup>

#### Sewage and Solid Wastes

Sewage from the houses is removed through underground lines linked to the Addison sewer system.

Solid wastes are disposed through the services of Browning and Ferris Company, a private contractor.





**FIGURE 2 Vicinity Map of Addison Army Housing Units**

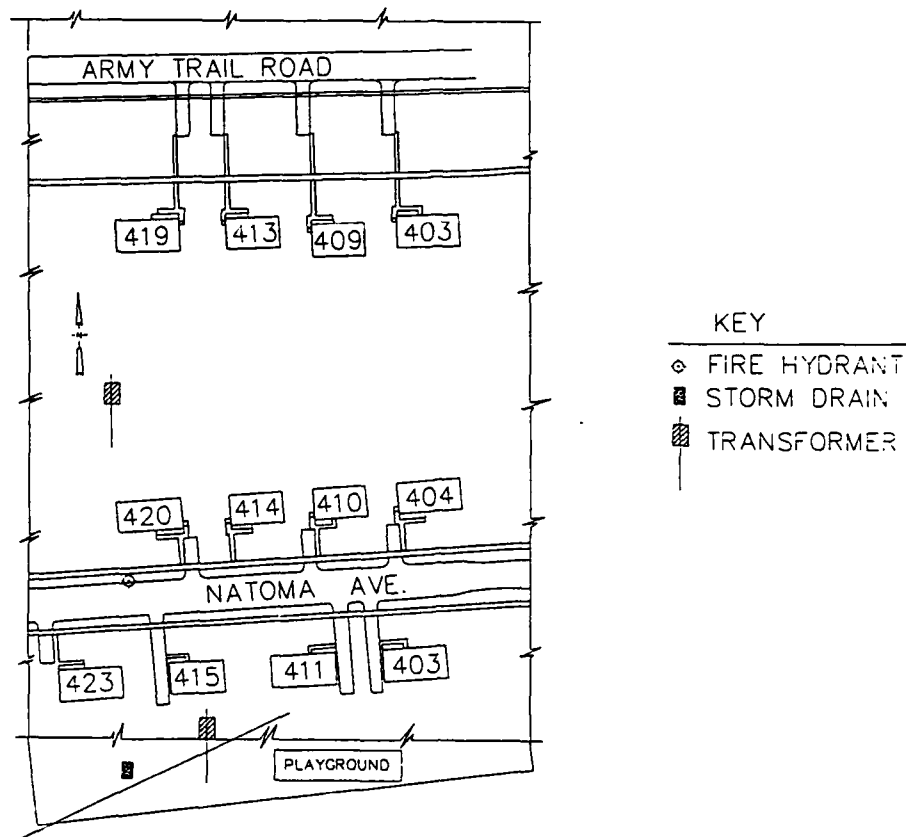
### **Fuel Storage**

Natural gas is supplied to the houses by the Northern Illinois Gas Company. There are currently no fuel storage tanks on the property.

Prior to 1988, above-ground oil storage tanks of 275-gallon capacity were used. These tanks have been decommissioned and removed from the site. There is no documentation of spills or leaks from any of these above-ground tanks during their period of service.

### **Storm Drainage Systems**

The housing units are connected to the Addison storm drainage system.



**FIGURE 3 Site Plan Map of Addison Army Housing Units**

### **Other Permanent Structures or Property Improvements**

Besides the 12 housing units, there are no other permanent structures on the property.

## **2.3 PROPERTY HISTORY**

### **2.3.1 Nike Defense Program and Typical Battery-Level Practices**

Generic information on the national Nike anti-aircraft defense program has been compiled in two studies, one commissioned by the Army Corps of Engineers<sup>7</sup> and the other by the U.S. Army Toxic and Hazardous Materials Agency.<sup>8</sup> In both studies, independent contractors relied on information contained in unclassified documents related to the Nike surface-to-air missile program, including engineering drawings and specifications (for the facilities and the missiles themselves), interviews with Army personnel participating in the Nike program, and operations manuals and directives relating to the operations and maintenance of Nike facilities. Taken together, these two reports represent the most complete assemblage of generic information on the Nike



missile program from an environmental perspective. Salient points from both reports are condensed below.

At its zenith in the early 1960s, the Nike program included 291 batteries located throughout the continental United States. The program was completely phased out by 1976, with many of the properties sold to private concerns or excessed to state or local governments for nominal fees.

Nike Ajax missiles were first deployed in 1954 at installations throughout the continental United States, replacing, or in some cases augmenting, conventional artillery batteries and providing protection from aerial attack for strategic resources and population centers. Typically, Nike batteries were located in rural areas encircling the protected area. The Ajax was a two-stage missile using a solid-fuel booster rocket and a liquid-fuel sustainer motor to deliver a warhead to airborne targets.

The Ajax missile was gradually replaced by the Nike Hercules missile, introduced in 1958. Like the Ajax, the Hercules was a two-stage missile, but it differed from the Ajax in that its second stage was a solid-fuel rather than liquid-fuel power source and its payload often was a nuclear rather than conventional warhead. Ajax-to-Hercules conversions occurred between 1958 and 1961 and required little change in existing Nike battery facilities. A third-generation missile, the Zeus, was phased out during development and consequently was never deployed.

A typical Nike missile battery consisted of two distinct and separate operating units, the launch operations and the integrated fire control (IFC) operations. The two operating areas were separated by distances of less than two miles, with lines of sight between them for communications purposes. A third separate area was also sometimes part of the battery. This area was typically equidistant from the two battery operating sites and contained housing for married personnel assigned to the battery. Occasionally, these housing areas also contained battalion headquarters, which were responsible for a number of Nike batteries.

Depending on area characteristics and convenience, the housing areas were often reliant on the launch or IFC sites for utilities such as potable water, electrical power, and sewage treatment. In those instances, buried utility lines connected the housing area to one or both of the other battery properties. It is also possible, however, that housing areas were completely independent of the missile launcher and tracking operations. In those instances, the necessary utilities were either maintained on the housing site or purchased from the local community. In many localities, as the character of the land area around the housing units changed from rural to suburban or urban, communities extended utility services to the housing unit locations, in which case conversions from independent systems to community systems were made.

A large variety of wastes was associated with the operation and maintenance of Nike missile batteries. Normally encountered wastes included benzene, carbon tetrachloride, chromium and lead (contained in paints and protective coatings), petroleum hydrocarbons, perchloroethylene, toluene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, and trichloroethylene. Because of the rural locations of these batteries, and also because very few regulatory controls existed at that time, most of

these wastes were managed "on-site." (Unused rocket propellants and explosives, however, would always have been returned to central supply depots and not disposed of on-site.) It is further conceivable that wastes generated at one of the Nike properties may have been transferred to its companion property for management or disposal.

Wastes related to missile operation and maintenance would not have been purposely transferred from a battery operating area to a housing area with no facilities for waste management or disposal. In some instances, however, the sewage treatment facilities for all Nike battery properties were located at the housing area; that possibility cannot be automatically ignored. Finally, where housing areas received various utilities from either of the operating areas, it is also possible that wastes disposed of on those other properties may have migrated to the housing area via the buried utility lines. And since decommissioning of the Nike batteries did not normally involve removal of buried utility or communication lines, any such contaminant migration is likely to have gone unnoticed.

### 2.3.2 Addison Housing Units

The Addison housing units were constructed in 1958 to provide family housing for military personnel assigned to the Arlington Heights Nike battery. However, the housing area was independent of the battery with respect to all utilities and services. Twelve single-family houses were erected on the property. Since decommissioning of the Nike battery in the early 1970s, this property has been used to house active-duty military personnel in the Chicago area.

Since the property's development in 1958, no other permanent structures have been added. However, renovations and improvements include new roofs, sidewalks, stoops, floor tiles (in most of the units), insulation for attics (fiberglass), windows, and venetian blinds; and the air-conditioning of homes.<sup>2</sup> Another recent improvement was the replacement of the original oil-fired furnaces with new furnaces,<sup>2</sup> which use natural gas as fuel. The use of fuel oil was discontinued, and the fuel-oil storage tanks have been decommissioned and removed from the site.<sup>3</sup>

## 2.4 ENVIRONMENTAL SETTING AND SURROUNDING LAND USE

Addison is a western suburb of Chicago, about 20 miles away from the city. The housing area is immediately surrounded by other residential properties. Within a mile are shopping areas, a library, the village hall, and schools.

## 2.5 GEOLOGIC AND HYDROLOGIC SETTINGS

The geologic and hydrologic settings of the Chicago area, in which Addison is located, are described in two reports prepared by the Illinois State Geological Survey.<sup>9,10</sup> The Chicago area is located in northeastern Illinois on a broad, gently sloping arch of the Paleozoic bedrock formations. Glacial deposits overlie the bedrock and constitute the surface. The major features of the surface are thus depositional in character -- moraines, outwash plains, valley trains, filled lake basins, and sand dunes.

The glacial deposits in the Chicago area are almost entirely Wisconsinian in age. Deposits from Illinoian and Kansan glaciation are evident only in areas west of the area. Glacial deposits in the area are about 100 feet thick on average and belong to the Wadsworth Till Member of the Wedron Formation. The gray clayey till of the glacial deposits occurs mixed with the older rocks and black shale of Mississippian and Devonian ages. Overlying the glacial drift is a thin deposit of wind-blown silt called loess. Although the maximum thickness of the loess is only a few feet, it is readily distinguishable from the till below. "Modern soil" still in the process of formation lies at the very top of the surface.

The bedrock unit immediately underlying the glacial deposits is mainly Silurian dolomite (395 to 400 million years old), deposited from a shallow interior sea. Younger rocks of Devonian, Mississippian and Pennsylvanian age are seen in regions surrounding the Chicago area and also inside the area in the fault blocks of the Des Plaines Disturbance. The Silurian dolomite has a maximum thickness of about 500 feet in the southeastern part of the area.

Ordovician rocks (430 to 500 million years old) form an older layer. These rocks were also deposited in shallow seas and are divided into three major series, all of which occur in the Chicago area. The lower Canadian Series is largely dolomite but contains some sandstone. The middle Champlainian Series is largely dolomite and limestone and has a prominent sandstone at the base. The upper Cincinnati Series is largely shale and contains some limestone. The Ordovician strata ranges from 700 to 1,100 feet thick.

Rocks of Cambrian age (500 to 570 million years old) lie below the Ordovician rocks. The lower half of the Cambrian rocks is part of the Mt. Simon and Eau Claire formations and consists largely of sandstone; the upper half is dolomite, sandy dolomite, sandstone, and siltstone belonging to the Iron-ton-Galesville Series and upwards. The thicknesses of these deposits is estimated to be between 3,000 and 4,000 feet, nearly twice the thickness of all the younger strata.

The crystalline, pre-Cambrian rocks are granitic and form the bottommost unit. In the Chicago downtown area, these rocks occur at a depth of 4,500 feet.

Four major aquifer systems, separated on the basis of the hydrologic properties of sources and recharge, are present in northeastern Illinois, which includes the Chicago area. They include a glacial-drift system, a shallow-bedrock system, and two deep-bedrock systems.

The glacial-drift aquifer system is restricted to the unconsolidated material overlying the bedrock. The major component of recharge to this system is local precipitation.

The shallow-bedrock aquifer system is formed by those bedrock units that are recharged locally from precipitation. This system consists of Silurian dolomite, and shale and dolomites of the Maquoketa group. The latter separates the Silurian aquifer from the deep bedrock aquifers. Nonetheless, appreciable downward leakage occurs through the Maquoketa group.

The two deep-bedrock aquifer systems are the Cambrian-Ordovician system and the Mt. Simon system. The major aquifers in the deep systems are the Glenwood-St. Peter, Ironton-Galesville, and Mt. Simon sandstones. However, other beds in the systems also contribute water at some locations. Recharge to the deep units is mostly from areas west and north of the six-county Chicago metropolitan area, where the rocks crop out at the surface or lie immediately below the glacial drift. Other recharge is contributed by downward leakage through the shallow bedrock aquifer system, as mentioned previously.

The Addison housing area obtains water from Addison, which in turn obtains water from wells about 200 feet deep. The well water can be characterized as hard, with a high iron content. There has been no evidence of contamination in the Addison water supply. Furthermore, Addison and other towns in DuPage County are likely to obtain water from Lake Michigan by the year 1992.

### **3 ENVIRONMENTALLY SIGNIFICANT OPERATIONS**

#### **3.1 ABOVE-GROUND TANKS**

Each housing unit was originally equipped with a 275-gallon above-ground fuel-oil storage tank. These tanks were in service from 1958 until 1988. The tanks were removed coincident with replacement of the original oil-fired furnaces with natural gas-fired furnaces. No problems with the above-ground tanks have ever been documented. Inspection of the former tank locations (behind each unit) showed no evidence of spills or leaks from any of the above-ground tanks.<sup>3</sup>

#### **3.2 ASBESTOS CONSTRUCTION MATERIALS**

Housing officials have reported that no asbestos-containing insulation was used in construction of the homes.<sup>3</sup> Inspection of one of the units during the site visit confirmed the absence of insulation on hot-water pipes and in other areas of the house.<sup>3</sup> Floor tiles originally installed in the units may have contained asbestos. These floor tiles have since been replaced in the majority of the units. The remaining original floor tiles were found to be in good condition.

#### **3.3 PCB MATERIALS**

There is no documentation of the presence of PCBs in the Army-owned pole-mounted electrical transformers on-site. No spills or leaks from any of the transformers was evident.

#### **3.4 STORM-WATER DRAINAGE**

It was reported that water stagnation occurs following rain storms in the lawn area situated between the two rows of houses; one row is on Army Trail Road and the other is on Natoma Avenue (see Fig. 3).<sup>4</sup> It was also reported that design work toward providing proper drainage of this area is in progress.<sup>4</sup>

#### 4 KNOWN AND SUSPECTED RELEASES

No major releases or impacts on the environment have occurred at the Addison housing area. No hazardous wastes or hazardous materials are stored on-site or have been released from the site.

There is no evidence of releases from any of the above-ground fuel-oil storage tanks which were removed from the site in 1988. These tanks became unnecessary when natural gas was supplied to the houses and the original oil-fired furnaces were replaced with gas-fired units.

The Army-owned electrical transformers on-site may contain PCBs. However, no spills or leaks from any of these transformers were observed.

No asbestos-containing insulation is present on water-pipes in the units. Original floor tiles, which may have contained asbestos, have been replaced in the majority of the units. No problems have been noted with the original floor tiles which still remain in place.

## 5 PRELIMINARY ASSESSMENT CONCLUSIONS

Although this property was originally developed as part of a Nike missile battery located in Arlington Heights, Ill., no wastes associated with the operation or maintenance of the battery were ever delivered to or managed at this housing property. Furthermore, the housing facility was completely independent of the battery's launch and fire-control operations with respect to water, sewer, and electrical utilities. No documentary evidence was found of utility connections between this housing site and the other properties composing the Arlington Heights Nike missile battery. The operations at the housing property have not adversely affected the environment.

The Army-owned electrical transformers have not been tested for PCBs. No spills or leaks were observed, however.

Apparently, asbestos or asbestos-related products are not present in the houses, except for original floor tiles still present in a few of the units. These tiles are not reported to be deteriorated, however.

The above-ground oil storage tanks formerly in use on the property appear to have functioned well, with no documented spills or leaks. This information is not recorded, however. Apparently, the tanks were taken out of service when natural gas was obtained from a public utility, coinciding with the installation of new furnaces in the houses in 1988.

Rain-water stagnation occurs frequently in the lawn area in between Army Trail Road and Natoma Avenue. This condition does not constitute an adverse environmental impact. Design work is in progress toward correcting this problem.

## 6 RECOMMENDATIONS

The Addison housing facility represents no imminent or substantial threat to human health or the environment. There is no evidence to suggest that hazardous or toxic constituents have ever been released from this property. No immediate remedial actions, therefore, are warranted for the site. However, one action is recommended prior to release of this property:

- Sample the Army-owned electrical transformers for the presence of PCBs and label the tested transformers according to applicable regulations.<sup>11</sup>

This recommendation assumes that the property will most likely continue to be used for residential housing.

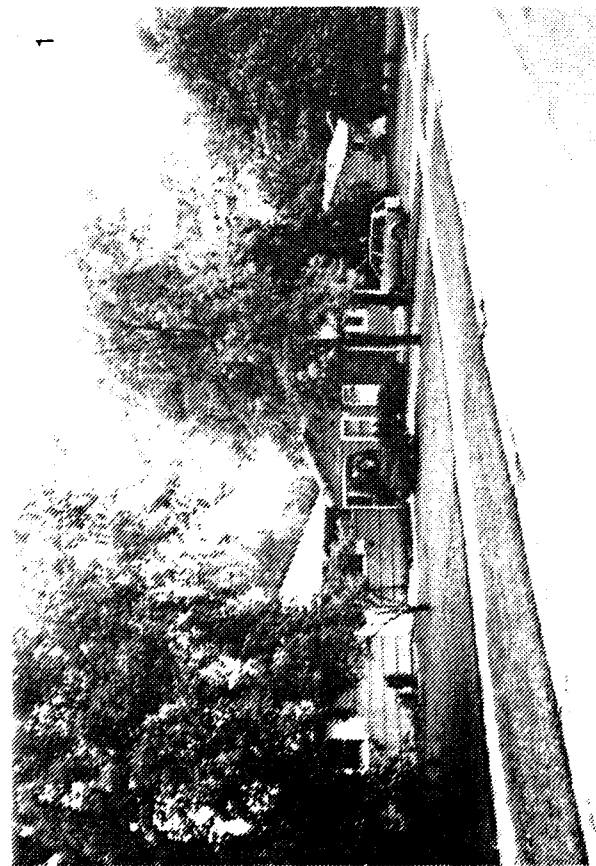


## REFERENCES

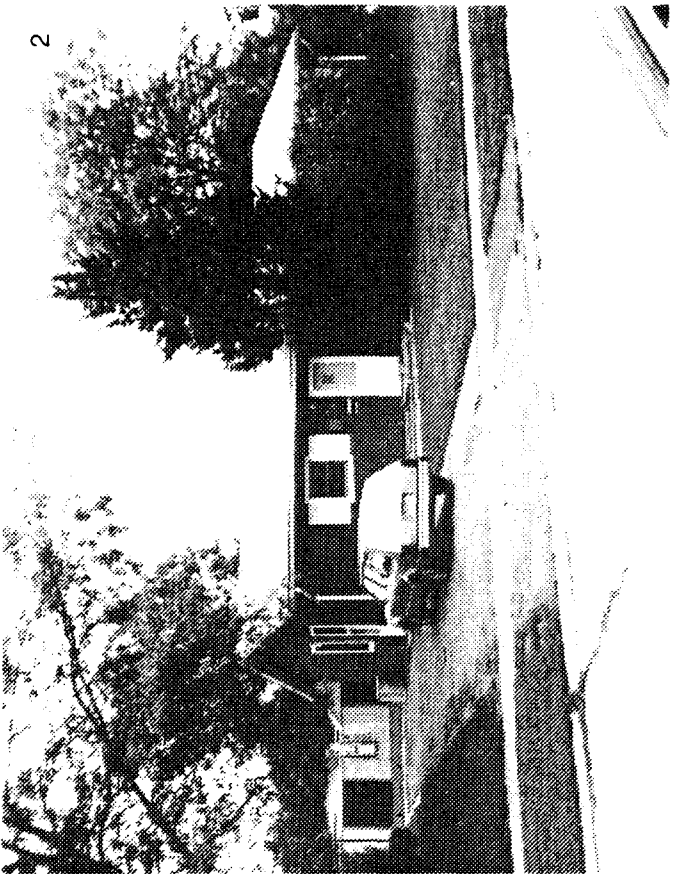
1. *Base Realignments and Closures*, Report of the Secretary's Commission (Dec. 1988).
2. *Real Property Record-Buildings, Addison, Illinois*, Directorate of Engineering and Housing, Fort Sheridan, Ill. (1955 to 1959).
3. Field notes of ANL investigators taken during the site visit on August 22, 1989.
4. Notes taken by an ANL investigator during a meeting with DEH personnel on September 1, 1989, and telephone conversations on September 5 and 14, 1989.
5. *Rand McNally Commercial Atlas and Marketing Guide*, 118th Ed., Rand McNally and Company, Chicago (1987).
6. Letter from the Directorate of Engineering and Housing of the Department of the Army to John Schneider (Aug. 29, 1989).
7. U.S. Army Corps of Engineers, Huntsville Div., *Investigation of Former Nike Missile Sites for Potential Toxic and Hazardous Waste Contamination*, Law Engineering and Testing Co., LEG-Government Services Division, LEG Job #601 (March 1986).
8. U.S. Army Toxic and Hazardous Materials Agency, *Historical Overview of the Nike Missile System*, prepared by B.N. McMaster et al., Environmental Science and Engineering, Inc., for USATHAMA Assessments Div., Aberdeen Proving Ground, Md. (Dec. 1984).
9. Willman, H.B., *Summary of the Geology in the Chicago Area*, Circular 460, Illinois State Geological Survey, Urbana, Ill. (1971).
10. Hughes, G.M., P. Kraatz, and R.A. Landon, *Bedrock Aquifers of Northeastern Illinois*, Circular 406, Illinois State Geological Survey, Urbana, Ill. (1966).
11. Code of Federal Regulations Title 40, Part 761-Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions, Environmental Protection Agency, pp. 163-205 (July 1, 1986).

**APPENDIX:**  
**PHOTOGRAPHS OF ADDISON HOUSING FACILITY**  
**AND SURROUNDING LAND**

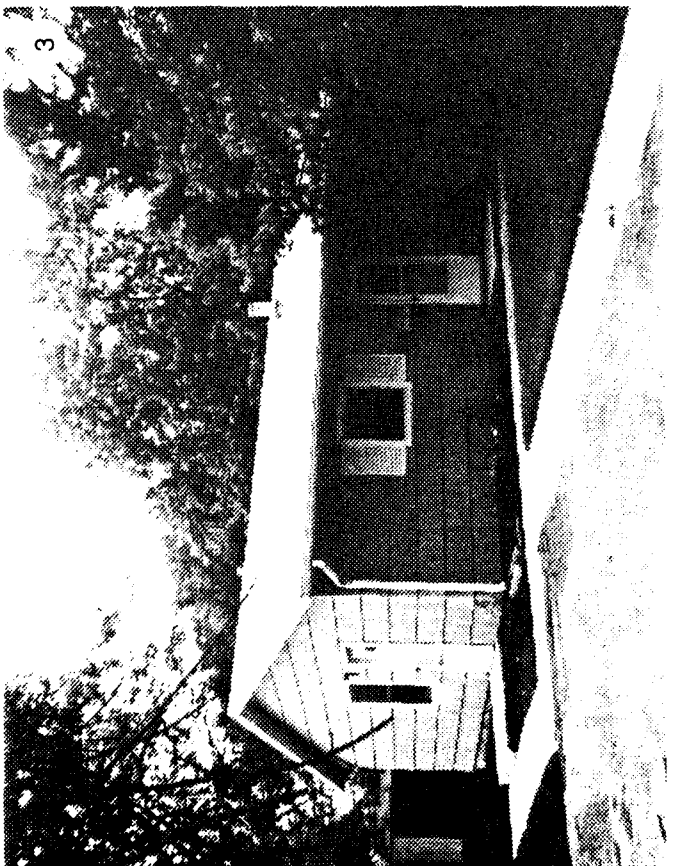




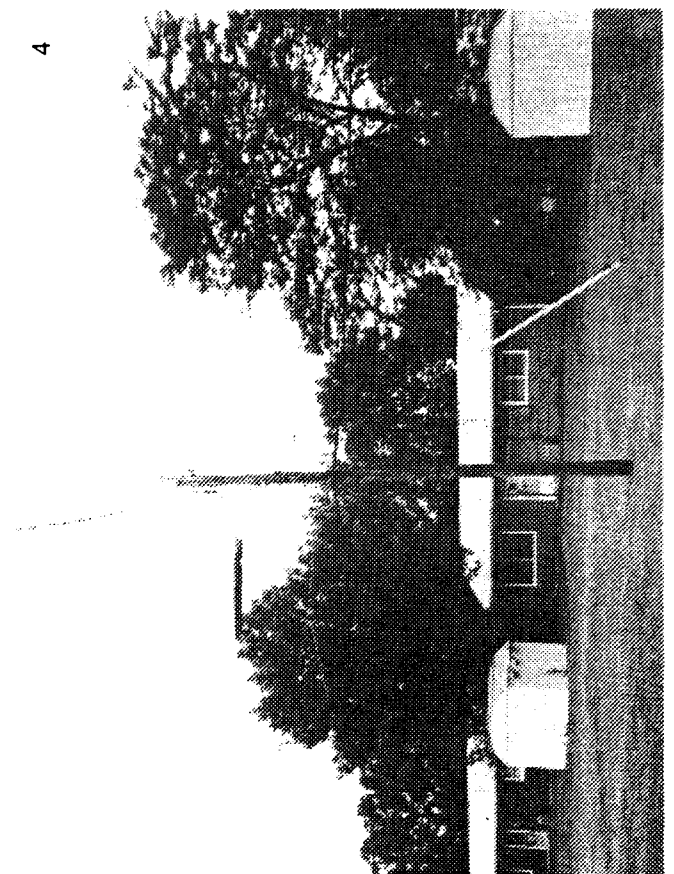
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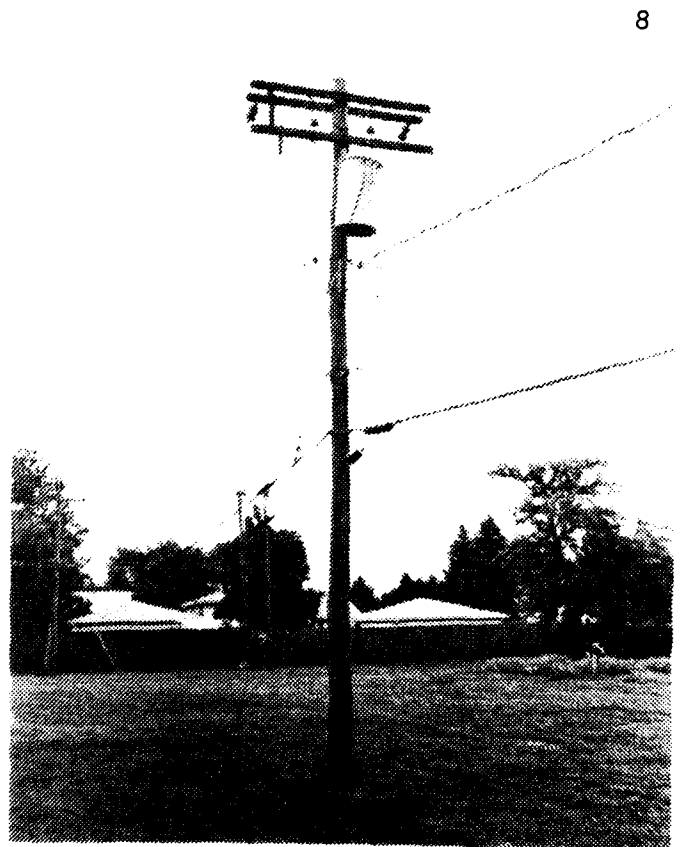
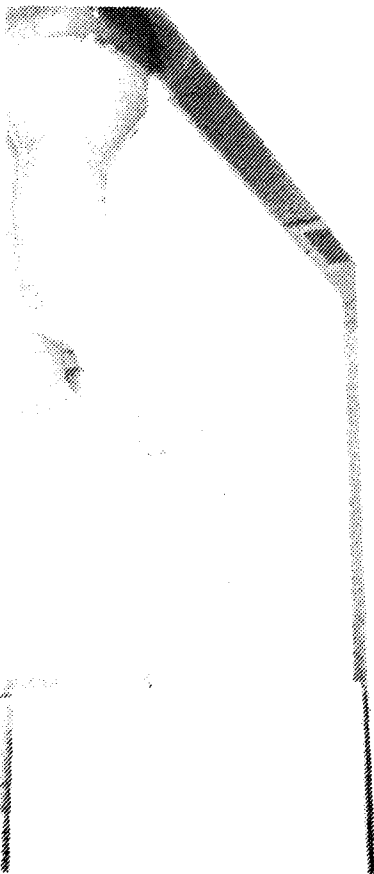
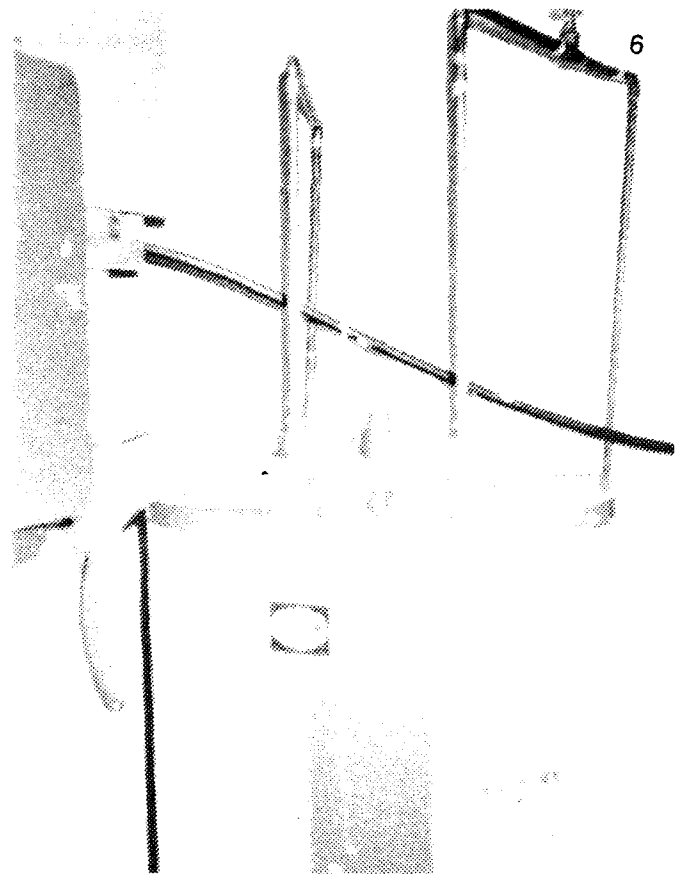
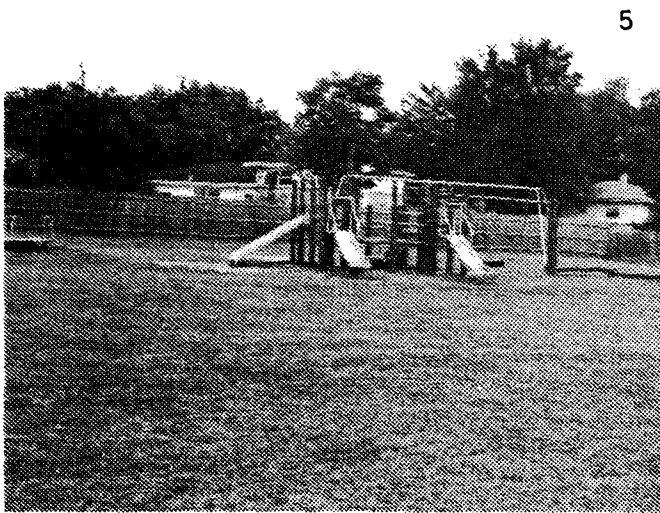
2



3



4



**IDENTIFICATIONS OF PHOTOGRAPHS**

1. A view showing three of the four housing units on one row; there are three such rows of houses at this site.
2. Front view of one of the housing units, with parking area, and with storage shed at the rear.
3. Close-up view of another housing unit; front and side entrances to the house, and the down spout connected to the rain gutter, are seen.
4. The rear area between two rows of houses; storage sheds are in this area.
5. A playground for children; in the background, beyond the fence, are private residences.
6. Hot water heater and associated piping are shown here; insulation materials are not used around the heater and the pipes.
7. The furnace and air ducts shown here again evidence the absence of insulation materials.
8. Utility pole with a transformer mounted near the top; transformers at this site are owned and maintained by the U.S. government.